# APPENDIX E - VENDORS AND PRODUCT SHEETS

Vehicle to Roadside Communications/Electronic Data Interface (EDI)



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#### ABOUT PREPASS

## What is PrePass?

PrePass is an automatic vehicle identification (AVI) system that allows participating transponder equipped commercial vehicles to bypass designated weigh stations, port-of-entry facilities and agricultural interdiction facilities. Cleared vehicles may proceed at highway speed, eliminating the need to stop. That means greater efficiency for shippers and improved safety for all highway users.

Participating vehicles are pre-certified. Carrier's safety record and credentials are routinely verified with state & federal agencies. PrePass weigh stations employ weigh-in-motion (WIM) scales to electronically weigh the vehicles while AVI antennas verify the identity and compliance of trucks as they approach the weigh station. As a truck passes over the WIM, its axles and gross weight are calculated and the AVI integrates the PrePass transponder verifying state requirements. The AVI antenna also communicates bypass status to the driver. If weight and credentials are satisfactory, a green light and audible signal from the PrePass transponder advise the driver to bypass the weigh station. Otherwise a red light and audible signal advise the driver to pull into the weigh station.



Click here to see how the system works

Vehicular Tracking System (Semi-Active)

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restaurants, airports, trucking firms, and barrier-based toll

The reader system can be configured for custom operation by a combination of externally accessible hardware jumpers and menu driven software settings accessed through the dedicated RS-232 maintenance communication port. The reader system is capable of communicating transponder/reader information through a variety of industry standard interfaces, as well as, reporting transponder identification information through RS-232, RS-422, and RS-485 communication connections. Additionally, each of the transponder-reading channels has its own independent Wiegand protocol output.

#### Highlights:

facilities.

- · Windshield mounted transponder
- Read range up to 50 feet
- · Unique security feature that deactivates the transponder once removed from the windshield
- One reader supports up to 4 transponder read points

## RFID PRODUCTS

Active RFID System

Toll Collection

Vehicular Tracking

#### Passive RFID System

Long-range Reader

Cash Card Terminal

<u>Ultra Light Reader</u>

Read/Write Handheld

Long-range Handheld Handheld w/ GPS Rec

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### **RFID Products**

#### Active and Semi-Active RFID Systems

Active RFID Tags are designed to actively transmit data to the reader using the power of a battery attached to the tag. Semi-Active Tags are designed to transmit data by reflecting or

backscattering the RF energy back to the reader. There is a battery attached to the tag to keep the electronics of the tag operational.



#### Passive RFID Systems

RFID Passive tags transmit data to the

reader by reflecting or backscattering the RF energy back to the reader. The tag does not require a battery to operate. The size of the tag is limited by the thickness of the chip (integrated circuit) and the antenna (which is often printed on a mylar substrate). The transponder therefore is paper-thin with an area of a credit card or less.

#### RFID PRODUCTS

#### Active RFID System

Toll Collection

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#### Passive RFID System

Long-range Reader

Cash Card Terminal

Ultra Light Reader

Read/Write Handheld Long-range Handheld

Handheld w/ GPS Rec

## SmartWatch<sup>™</sup> SecureBorders Solutions

U.S. border security has become the focus of scrutiny since the terrorist attacks of September 11, 2001. It is now more important than ever to monitor the entry of foreign nationals into the United States. The problems associated with illegal immigration across U.S. borders are well known. Security must now be enhanced along our international borders without impacting the profitable trade relationship between our neighbors. We must log in, log out, and monitor the movement of foreign nationals within the United States to reduce the threat from external terrorists.



TransCore understands these security requirements and has designed, integrated, and deployed border crossing systems since 1995 to expedite the movement of authorized travelers and freight through entry/exit points, thereby allowing agents to focus on unidentified, high-risk transactions. The SmartWatch™ SecureBorders offerings are part of TransCore's SmartWatch framework of security-focused solutions, featuring the integration of RFID and other advanced technologies to enhance both efficiency and security of ground transportation systems.

#### THE SENTRI SYSTEM DEPLOYED BY TRANSCORE

Frequent international border commuters can enroll in the Secure Electronic Network for Travelers Rapid Inspection (SENTRI), a system TransCore initially developed for the Immigration and Naturalization Service (INS) to enhance the efficiency of the border crossing process.

Utilizing sensors based on radio frequency identification (RFID) technology, the system registers frequent international travelers and authorizes them to pass through dedicated commuter lanes at international border crossings. These lanes expedite the movement of low-risk travelers, reduce congestion, and allow reallocation of inspection resources to monitor high-risk travelers.

The SENTRI system is currently installed at the borders of San Ysidro and Otay Mesa, CA and El Paso, TX. The enforcement capabilities and congestion reduction have exceeded all expectations.

There are three key security aspects of the SENTRI system, which is graphically depicted on the following page:

- Registration and background check Includes fingerprinting, making photo ID, checking vehicle, and attaching a RFID tag to the vehicle of each trusted traveler
- Booth security Includes bollards to keep lanes physically closed, automatic vehicle identification (AVI) sensors for detection and identification, and displays that allow inspectors to view data about the approaching vehicle, its driver, and its passengers





Exit Control Includes signs and traffic lights at Exit Surveillance Zone; barrier gates, signs, and traffic lights at Enforcement Zone 1; and barrier gates, signs, traffic lights, and tire shredders at Enforcement Zone 2 to eliminate the possibility of port runners

#### A BROADER APPLICATION FOR ENTRY/EXIT SECURITY

TransCore's vision is to create a North American standard for all secure border entry/exit control systems. To that end, TransCore has worked with both public- and private-sector stakeholders as a systems integrator for various secure border projects. For example, at the Ports of Tacoma, Seattle, and Everett, WA and Long Beach, CA, all trade transaction elements (carrier, cargo, container, and driver) are positively identified and monitored through the trade gateways. Also, at the Ports of Long Beach and Los Angeles/Alameda corridor in southern California, freight is moved 20 miles inland to the intermodal freight processing facility. Here electronic seals are used to monitor security and positively identify freight containers associated with a specific train and rail car.

#### TRANSCORE IS THE RIGHT CHOICE

TransCore provides technology-based services and products that enable its customers to efficiently manage ground transportation systems, assets, and transactions. With a world-class ISO 9001-certified design, development, and manufacturing center and more than 80 patents, TransCore's expertise in providing solutions that improve transportation efficiency and security is unparalleled. For more information on the SecureBorders application, e-mail a request to <a href="mailto:secureborders@transcore.com">secureborders@transcore.com</a>. Application profiles on additional SmartWatch security-focused solutions are found at <a href="mailto:www.transcore.com/smartwatch">www.transcore.com/smartwatch</a>.



For more information call: 1.800.923.4824 or 972.387.8197, or fax 972.733.6486.

www.transcore.com

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## SmartWatch<sup>™</sup> SecurePass Solutions

Facility security is more important than ever. Effective access control systems must be installed to monitor and control the passage of people, vehicles, and freight into and out of critical facilities, such as:

- Military bases
- Nuclear plants
- Oil refineries

- Government facilities
- Chemical plants
- Water resources

It is imperative to find better and more economical ways to identify personnel, protect facilities, and shield critical equipment from external threats or security breaches. Implementing security measures has traditionally been manpower intensive and costly to maintain and staff. TransCore has been successfully designing, integrating, and deploying secure access control systems throughout the United States for more than a decade to automate and improve facility security.

The SmartWatch<sup>TM</sup> SecurePass solutions are part of TransCore's SmartWatch framework of security-focused offerings, featuring the integration of RFID and other advanced technologies to enhance both efficiency and security of ground transportation systems. The SecurePass system uses proven radio frequency identification (RFID) tags and readers to provide:



- Positive detection and identification of authorized vehicles, drivers, and passengers
- Secure and configurable multi-gate, multi-lane, and flex-lane entrances, gates, and exits
- Accurate screening, immediate identification, and expedited movement of authorized personnel and vehicles through entry and exit points of sensitive facilities

The system permits security officers the ability to automatically separate known (trusted) vehicular traffic from unknown vehicular traffic at entry and exit points of secure facilities. This permits security official to focus resources on unknown traffic potentially reducing labor costs and increasing throughput at secure entry points for trusted vehicular traffic.

#### BASIC SYSTEM COMPONENTS



eGo Windshield Sticker Tag

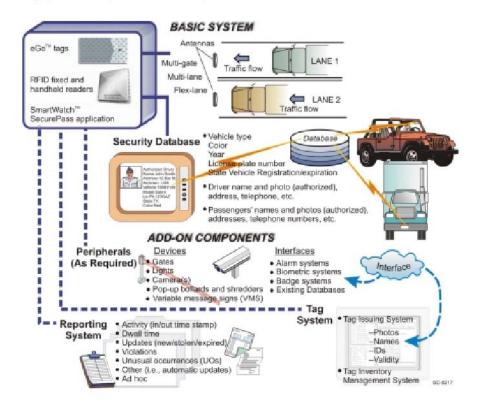
The SecurePass system includes three basic components: tags, readers, and the SecurePass application. The eGo™ tag is a low cost, paper-thin tag (approximately 1.75 in. x 3 in.) that is issued to authorized people and vehicles. This flexible tamper-resistant tag is affixed to the upper portion of the driver's side windshield inside the vehicle.



The readers used in the SecurePass system include both fixed and handheld models. As the vehicle approaches the gate, the tag is read by the reader. The SecurePass system gives the customer the ability to create a database with specific information on authorized vehicles, drivers, and passengers. The reader compares the information embedded in the tag to files in a database. If the information that is stored in the tag matches that in the database, a vehicle is cleared for entry.

#### SYSTEM OPERATION

Typically, a green light at the entry/exit point signals that the vehicle is cleared for access. A red light signifies that the vehicle is not properly registered or does not have authorized access, and it warrants a closer screening of the vehicle and occupants before access is granted. With the use of SecurePass add-on components, the system can control access to specific areas by remotely opening and closing gates for authorized vehicles. The SecurePass system is designed to operate with multiple peripheral devises including cameras, gates, presence detectors, vehicle retention devices, and interface with existing database, badge system, alarm systems and biometric systems.





Several enhancements can be added to the basic SecurePass system to improve record keeping, increase flexibility, and expand security functionality. These components include a reporting system, which provides critical-use information, such as dwell time, violations, and unusual occurrences; a tag system, which assists with tag issuing tasks and includes a tag inventory management application; and other peripherals, such as interfaces and devices, as illustrated in the diagram below.

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